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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,275	12/06/2001	Gerd Konrad Bayer	DE920000090US1	3365

47049 7590 05/15/2006

FERENCE & ASSOCIATES  
409 BROAD STREET  
PITTSBURGH, PA 15143

EXAMINER
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JOO, JOSHUA

ART UNIT	PAPER NUMBER
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2154

DATE MAILED: 05/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/683,275

Applicant(s)

BAYER ET AL.

Examiner

Joshua Joo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**Response to RCE/Amendment filed 12/19/2005**

1. Claims 1-13 are presented for examination.

***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/19/2005 has been entered.

***Response to Arguments***

3. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 112***

4. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- i) Regarding claims 1 and 13, "the computing device" lacks antecedent basis. It is unclear as to which computing device, "the computing device" is referring to in the claims as there are "one or more computing device".

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 3, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Smith et al. US Patent #6,801,927 (Smith hereinafter).

7. As per claim 1, Smith teaches the method, characterized by the steps of:

operating a local memory (fig. 1 item 124) being associated with the network coupling adapter as a cache memory (fig. 1 item 133) relative to a system memory (fig. 1, item 110) of the computing device for storing transmission control information (fig. 1, item 134; Col. 5, lines 6-37; Col. 5, line 51 – Col. 6, line 26. Communication protocol stack. Item 134 including TCP/IP which is stored in the working memory.), wherein information other than transmission control information is stored in the system memory (fig. Item 110; Col 5, lines 10-14, 38-50. non-volatile memory. Contains data and code, which is other than transmission control information.).

8. As per claim 3, Smith teaches the method comprising the steps of using said transmission control for the processing of queues or queue pairs (Col. 8, lines 55-67).

9. As per claim 12, Smith teaches a network coupling element comprising a local memory being operable as a cache memory (fig. 1; items 133 and 123) relative to said interconnected memory (fig. 1; Col. 5, lines 6-21.).

***Claim Rejections - 35 USC § 103***

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10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 2, 4-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith, in view of Pettey et al. US Patent #6,594,712 (Pettey hereinafter).

12. As per claim 2, Smith does not teach InfiniBand Architecture. Pettey teaches of InfiniBand Architecture (Abstract; Col. 3, line 1 – Col. 4, line 22).

13. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Smith and Pettey because Pettey's teachings of an InfiniBand Architecture would avoid reduction in usable bandwidth of local bus of the system (col. 3, lines 20-28).

14. As per claim 4, Smith and Pettey taught teach method according to claim 2. Smith further teaches the method comprising the steps of using said transmission control for the processing of completion queue (Col. 8, lines 55-67).

15. As per claim 5, Smith and Pettey taught the method according to claim 2. Smith further teaches the method comprising the steps of using said transmission control for processing of address translation and protection tables (Col 5, lines 51-62. Inherent because of connections between adapter and server; and adapter and clients.).

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16. As per claim 6, Smith and Pettey taught the method according to claim 2. Smith further teaches the method comprising the steps of using said local memory for connecting at least one computer device (i.e. server) to a network (Col 5, lines 51-62. i.e. between adapter and clients).

17. As per claim 7, Smith and Pettey taught the method according to claim 2. Smith further teaches the method comprising the steps of using said transmission control information for bundled per queue or queue pair (Col. 8, lines 55-67).

18. As per claim 8, Smith and Pettey taught the method according to claim 2. Smith further teaches the method comprising the steps of configuring said cache memory not to discard transmission control information for particular queues after casting-out (Col. 6, line 52- Col. 7, line 15; Col. 8, lines 55-67).

19. As per claim 9, Smith teaches the method comprising the step of writing said transmission control information to the local memory (Col. 5, line 39–Col. 6, line 43). However, Smith does not teach InfiniBand. Pettey teaches of InfiniBand Architecture (Abstract; Col. 3, line 1 – Col. 4, line 22).

20. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Smith and Pettey because Petty's teachings of an InfiniBand architecture would provide translation of virtual addresses of multiple different remote nodes for the network (Col. 4, lines 47-54).

21. As per claim 10, Smith and Pettey taught the method according to claim 2. Smith further teaches the method comprising the steps of using said previous steps for connecting a plurality

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of I/O hardware devices associated with a computing device (Col. 5, line 39 – Col. 6, line 43.

Inherent since connections of clients, server and adapter;).

22. As per claim 11, Smith and Pettey taught the method according to claim 2. Smith further teaches the method comprising the steps of using said previous step for providing communication channels for interprocess communication between a plurality of process associated with one or more computing devices (Col. 5, line 39 – Col. 6, line 43. Inherent since connections of clients, server and adapter).

23. As per claim 13, Smith teaches the network coupling element comprising a local memory being operable as a cache memory (fig. 1, items 133 and 123) relative to said interconnected memory of the computing device (fig. 1; System 100; Col. 5, line 6-38). However, Smith does not teach InfiniBand Architecture. Pettey teaches of InfiniBand Architecture (Abstract; Fig. 2; Col. 3, line 1 – Col. 4, line 22; Col 25, lines 11-26).

24. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Smith and Pettey because Pettey's teachings of an InfiniBand Architecture would provide translation of virtual addresses of multiple different remote nodes for the network (Col. 4, lines 47-54).

### ***Conclusion***

25. A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action.


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26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966. The examiner can normally be reached on Monday to Thursday 8AM to 5PM and every other Friday.

27. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on 571 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

28. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 8, 2006  
JJ

 JOHN FOLLANSBEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100